

# Lubrication Index for Years 1928-1932 Inclusive

- Acidity, **17**, 65, 75  
Adhesion, **16**, 136.  
Air Cooling, **15**, 110.  
Air Compressor Oils:  
    Diesel Engine Requirements, **16**, 10; **17**, 4.  
    Effect of Carbon Residue, **16**, 6.  
    Essential Requirements, **14**, 52; **17**, 87, 88.  
    Lubrication Requirements, **15**, 95; **17**, 4, 19, 86-90.  
Air Compressor Operation, **14**, 102-4; **17**, 30.  
Air Cylinder Lubrication:  
    Methods, **17**, 88.  
Air Tool Lubrication, **14**, 57.  
Aircraft Engine:  
    Auxiliary Lubrication, **14**, 82; **15**, 143.  
    Bearing Construction, **14**, 81; **15**, 136, 138, 143.  
    Construction, **15**, 136; **18**, 75.  
    Cooling, **14**, 80; **15**, 117, 118, 134; **18**, 80.  
    Design, **18**, 73.  
    Dry Sump Lubrication, **15**, 136; **18**, 81.  
    Lubrication, **15**, 140; **18**, 73-84.  
    Oil Requirements, **14**, 73; **15**, 141, 142.  
    Operation, **15**, 133-144; **18**, 77.  
    Supercharger, **14**, 83; **15**, 144.  
    Throttle Control, **15**, 140.  
    Types of, **14**, 75; **15**, 138-140; **18**, 74, 82.  
Ammonia Systems, Selection of Lubricants for, **15**, 42.  
Automotive Engine:  
    Battery, **15**, 29.  
    Carburetion, **15**, 27; **16**, 74.  
    Cold Weather Protection, **15**, 118-120.  
    Compression Ratio, **15**, 29.  
    Constructional Requirements, **15**, 25; **16**, 80.  
    Ignition, **15**, 29.  
    Knocking, **15**, 30; **16**, 79.  
    Radiator Protection, **15**, 120.  
    Spark, **15**, 29.  
    Timing, **15**, 29.  
Automotive Lubrication:  
    Acidity, **14**, 48.  
    Air Filtration, **14**, 42; **16**, 83.  
    Chassis, **14**, 24.  
    Crankcase Dilution, **14**, 43; **16**, 84.  
    Effect of Carbon Residue, **14**, 40; **15**, 36; **16**, 6, 82.  
    Fuel Requirements, **15**, 30; **16**, 74-79.  
    Heavy Duty, **14**, 85-94.  
    Oil Filtration, **14**, 41; **16**, 83.  
    Oil Gauge Pressure, **16**, 81.  
    Pressure, **14**, 138.  
    Protection of, **14**, 41; **16**, 83.  
    Sulfur, **14**, 47; **15**, 32; **16**, 76.  
    Systems of, **14**, 37; **16**, 28-9.  
    Viscosity, **14**, 38; **15**, 35, 114-116.  
    Warm Weather Driving, **16**, 73-84.  
    Water, **14**, 45-47; **15**, 33-4; **16**, 77-8.  
Automotive Production Machinery:  
    Lubrication, **16**, 97-108.  
Bearing Design:  
    Pennsylvania State College Research, **17**, 49-60; **18**.  
Bearing Metals:  
    Casting, **14**, 62.  
    Pouring, **14**, 62.  
Bearings:  
    Accumulation of Carbon in, **16**, 11-12.  
    Adjustment and Alignment of, **17**, 77-82.  
    Aircraft Engine, **14**, 81; **15**, 136, 138, 143; **18**, 75.  
    Anti-friction, **14**, 82, 128; **15**, 16, 19, 113, 128, 138; **16**, 16, 54, 105, 125; **18**, 21, 76.  
    Automotive Engine, **15**, 26.  
    Ball, **15**, 20; **16**, 106.  
    Carding machine cylinder, **16**, 17.  
    Choice of, **15**, 10.  
    Classification of Marine Type, **17**, 39.  
    Cleaning of, **16**, 107.  
    Clearance, **16**, 80; **17**, 78.  
    Construction, **16**, 32, 51, 105.  
    Eccentric, **15**, 50.  
    Electric Crane, **14**, 22.  
    External Lubrication, **17**, 41.  
    Felt Roll, **16**, 127.  
    Guide, **16**, 53.  
    Indications of Wear, **14**, 129.  
    Kiln Car, **18**, 132.  
    Lubricating Systems, **17**, 40.  
    Lubrication of, **17**, 39, 49-60, 81; **15**, 66-8.  
    Magnet, **14**, 83; **15**, 143.  
    Main, **17**, 42.  
    Metals, **14**, 61.  
    Metal Plating, **18**, 76.  
    Mine Car, **14**, 20; **18**, 9.  
    Oil Film Pressure, **17**, 49-60.  
    Oil Grooves, **14**, 64; **15**, 137; **17**, 81.  
    Paper Machinery, **16**, 123.  
    Plain, **14**, 61, 122; **15**, 61-72; **18**, 10, 75.  
    Prediction of Performance, **18**.  
    Ring Oiled, **15**, 16.  
    Roller, **15**, 21, 58; **16**, 107; **18**, 10, 13-24.  
    Seal, **14**, 131.  
    Self Oiled, **15**, 58.  
    Sleeve Type, **14**, 61, 81; **15**, 136; **18**, 75.  
    Stoker, **15**, 24.  
    Temperatures, **18**, 18.  
    Thrust, **14**, 10; **15**, 138; **16**, 51.  
    Trunnion, **15**, 57.  
    Turbine, **16**, 91.  
    Types, **18**, 9.  
    Valve Rocker Arm, **15**, 143.  
    Venting, **18**, 16.  
Blowers, **17**, 86.  
Boiler Operations, **17**, 68.  
Brick and Tile Machinery:  
    Low Viscosity Lubrication, **16**, 93-5.  
    Lubrication of, **18**, 125-8.

- Carbon Residue, **14**, 40; **15**, 36, 96.
- Chemical Constituents, **16**, 2.
- Detriments of, **18**, 106.
- Effect on Air Compressor Service, **16**, 6, 11; **17**, 31.
- Effect on Automotive Service, **16**, 6, 11, 82.
- Effect on Diesel Engine Operation, **16**, 9, 11; **17**, 12, 21.
- Effect on Power, **18**, 107.
- Effect on Quenching, **18**, 41.
- Manner of Formation, **17**, 88.
- Methods of Determining:
  - Conradson, **16**, 3.
  - Hot Plate, **16**, 5.
  - Ramsbottom, **16**, 4
- Relation to Lubricating Performance, **16**, 1-12.
- Relation to Tractor Operation, **16**, 41-2.
- Result of Oil Breakdown, **17**, 87.
- Significance of, **17**, 65.
- Carding Machinery:
  - Cotton and Wool, **16**, 16.
  - Worsted, **14**, 21.
- Cement Mill Machinery:
  - Conveyors, **15**, 59.
  - Function of, **15**, 49.
  - Lubrication of, **15**, 49-60.
- Centrifugal Purification of Oil, **14**, 125; **17**, 36.
- Ceramics:
  - Low Viscosity Lubrication, **16**, 93-5.
- Chain Lubrication, **16**, 108.
- Clay Products Machinery, **18**, 121-32.
- Coal:
  - Automatic Firing Equipment, **15**, 13.
  - Breaking, **18**, 4, 11.
  - Cutting Machinery, **18**, 3, 7.
  - Cleaning, **18**, 4, 11.
  - Drilling, **18**, 2.
  - Handling Equipment, **14**, 112.
  - Loaders, **18**, 3, 8.
  - Mining Machinery Lubrication Requirements, **18**, 1-12.
  - Picking Machinery, **18**, 7.
  - Punching Machinery, **18**, 7.
  - Screens, **18**, 12.
  - Sorting, **18**, 4.
  - Stoker Design, **15**, 14.
- Cold Room Operation, **18**, 72.
- Compressed Air Machinery:
  - Lubrication of, **14**, 49-60.
- Compressors:
  - Air, **14**, 102-4; **15**, 95-6; **16**, 26-7; **17**, 86-90; **18**, 32-5.
  - Ammonia, **15**, 42, 47.
  - Carbon Dioxide, **15**, 47.
  - Ethyl Chloride, **15**, 47.
  - Gas, **17**, 94.
  - Methyl Chloride, **15**, 47.
  - Mine, **18**, 7.
  - Multi-Stage, **14**, 50.
  - Portable, **18**, 7.
  - Reciprocating, **17**, 85.
  - Refrigerating, **17**, 91.
  - Rotary, **17**, 86; **14**, 50.
  - Single Stage, **14**, 50.
  - Super, **17**, 90-1.
  - Types of, **14**, 50.
- Conveyors:
  - Automotive Plant, **16**, 104.
  - Cement Mill, **15**, 59.
- Cost of Lubrication, **14**, 97-108.
- Couplings:
  - Grease Lubricated, **18**, 47-8.
  - Oil Lubricated, **18**, 44-7.
- Crankcase Dilution, **14**, 43-5; **16**, 84.
- Cylinder Lubrication:
  - Gas Engine, **18**, 106.
  - Steam, **16**, 33.
- Demulsibility, **17**, 73-7.
- Diesel Engine Lubrication:
  - Bearing Lubrication, **16**, 31; **17**, 13-22.
  - Cost of, **14**, 104.
  - Cylinder Lubrication, **16**, 31; **17**, 4, 6, 13-22; **18**, 35.
  - Essential Characteristics, **17**, 3.
  - Influence of Construction on Choice of Lubricants, **17**, 1-12.
  - Selection of Lubricants, **17**, 4-5.
  - Systems, **17**, 5.
- Diesel Engine Operation:
  - Air Compressor Requirements, **16**, 10.
  - Air Filtration, **17**, 29.
  - Carbon Residue, **16**, 9; **18**, 35.
  - Drives, **16**, 30.
  - Engine Cooling, **15**, 92-3.
  - Fuels, **15**, 90-1.
  - Importance of Complete Combustion, **15**, 88.
  - Methods of Fuel Injection, **15**, 89.
  - Possible Causes of Wear, **15**, 85-7.
  - Sludge Formation, **16**, 9; **18**, 35.
- Drills:
  - Pneumatic, **14**, 51.
- Electric Railway Lubrication:
  - Journals, **15**, 74.
  - Power Consumption, **15**, 73.
  - Protection of, **15**, 75.
  - Waste, **15**, 76-9.
- Emulsibility:
  - Turbine Oils, **14**, 25; **16**, 56; **17**, 73-6.
- Emulsification, **16**, 137; **17**, 33.
- Causes, **16**, 138.
- Compounding as an Aid to, **17**, 70.
- Development and Relative Value of Tests, **17**, 73-7.
- Of Textile Oils, **18**, 110-11.
- Relation to Practical Lubrication, **16**, 138.
- Theory of, **18**, 111.
- Emulsoids, **16**, 138.
- Engine Cooling:
  - Aircraft, **14**, 80; **15**, 117, 118, 134.
  - Diesel, **15**, 92-3.
- Exhaust Steam for Process Heating:
  - Effect of Lubrication on the Use of, **17**, 66-72.
- Fatty Oil, Relation to Lubricating Value, **16**, 134.
- Filtration:
  - Automotive Oil, **14**, 41.
  - Automotive Air, **14**, 41.
  - Bulk, **14**, 123.
  - Continuous Unit, **14**, 124.
  - Principle of Air, **17**, 28.

## Flexible Couplings.

- Care of, **18**, 44.
- Cross Type, **18**, 48.
- Function of, **18**, 43-8.
- Lubrication, **18**, 43-8.
- Pin, **18**, 46, 48.
- Spring Type, **18**, 47.

## Foaming, in Turbine Oils, **17**, 76.

## Gas Compressors:

- Lubrication, **17**, 94-6.

## Gas Engine Lubrication, **18**, 97-108.

## Gasoline Evaluation:

- Distillation, **15**, 30; **16**, 75.
- End Point, **15**, 31; **16**, 76.
- Gravity, **15**, 34-5.
- Sulfur, **15**, 32; **16**, 76.
- Water Content, **15**, 34; **16**, 77.

## Gearing:

- Driving, **15**, 17.
- Exposed Lubrication of, **15**, 9, 23.
- Indications of Wear, **14**, 130.
- Industrial Truck, **14**, 20.
- Lubricant Characteristics, **15**, 124.
- Lubrication, **14**, 119, 142; **15**, 53, 129; **16**, 16, 71, 141-4; **17**, 63.
- Materials Handling, **14**, 119.
- Pressure Application of Lubricants, **16**, 116.
- Reduction, **15**, 22; **16**, 34, 102; **18**, 67-72.
- Rubber Industry, **16**, 141.
- Spur and Bevel, **15**, 23.
- Steel Mill, **16**, 110.
- Worm, **15**, 23; **18**, 69.

## Greases:

- Bearing Seal, **14**, 131.
- Characteristics, **14**, 17; **16**, 32, 47.
- Fiber, **14**, 16.
- Lime Base Cup, **14**, 14.
- Lubricating Value of, **17**, 63.
- Manufacture, **14**, 15.
- Operating Factors Which Influence Choice of, **14**, 18.
- Sett, **14**, 15.
- Soda Base, **14**, 16.
- Sponge, **14**, 16.

## Grease Lubrication:

- Hydraulic Turbines, **16**, 55.
- Means of, **16**, 113.
- Of Bearings, **16**, 107.
- Of Couplings, **18**, 47-8.
- Power Driven, **14**, 135; **16**, 114.
- Pressure, **15**, 3, 131; **16**, 48, 72.
- Spring Type, **14**, 134; **16**, 114.
- Typical Instances of Grease Lubrication, **14**, 20.
- Under Water, **15**, 97-9.

## Heavy Duty Engine Lubrication, **14**, 85-94.

## High Temperatures:

- Automotive Operation, **16**, 73-84.
- Bearing Service, **18**, 61-7.
- Cement Mill, **15**, 60.

## Highway Construction Machinery, **16**, 25-36.

## Horizontal Engines, **17**, 45.

## Hot Bearings:

- Causes, **17**, 82-4.
- Treatment, **17**, 82-4.

## Hot Rods:

- Treatment, **17**, 84.

## Hydraulic Equipment:

- Lubrication in Presence of Water, **15**, 106-7.
- Parts Involved, **16**, 51.
- Power Generating, **16**, 49-60.
- Systems of Lubrication, **16**, 54.

## Interfacial Tension, **16**, 135.

## Internal Combustion Engines. (See Automotive Lubrication.)

## Journal Lubrication:

- Electric Railway, **15**, 74.
- Low Viscosity, **15**, 82.
- Reduction of Wear, **16**, 87.

## Knitting Machinery. (See Textile.)

## Lathe Operation, **16**, 102-3.

## Loaders:

- Coal, **18**, 8.
- Mechanical, **18**, 3.

## Low Viscosity Lubrication:

- Brick and Tile Machinery, **16**, 93-5.
- Ceramics, **16**, 93-5.
- Electric Railway Service, **15**, 80; **16**, 86-8.
- Textile Machinery, **16**, 88-90.
- Turbine Bearing, **16**, 91-3.

## Low Viscosity Oils:

- Diesel Engine, **15**, 81.
- Electric Railway Service, **15**, 80; **16**, 86-8.
- Journals, **15**, 82.
- Steam Turbine, **15**, 81.

## Lubricant Characteristics:

- Adhesion, **16**, 136.
- Carbon Deposits, **16**, 139.
- Emulsification, **16**, 137; **18**, 110-11.
- Interfacial Tension, **16**, 135.
- Oxidation, **16**, 139.
- Requirements in Marine Service, **17**, 39.
- Saponification, **16**, 137; **18**, 111-12.
- Surface Tension, **16**, 134.

## Lubricant Seals:

- Importance of, **18**, 14.

## Lubricating Ability:

- Laboratory Determination of, **17**, 61-6.
- Methods of Determination, **17**, 63-4.

## Lubrication:

- Automatic, **15**, 129.
- Compressor, **17**, 85-96.
- Drip, **16**, 72.
- Grease Cup, **16**, 72.
- Importance of, **16**, 81-2; **17**, 38.
- Internal Combustion Engine, **16**, 28-9.
- In the Presence of Water, **15**, 97-108.
- Mechanical Force Feed, **14**, 140; **15**, 4, 41, 129; **16**, 39-40, 70, 98-100; **17**, 13, 89, 93; **18**, 25.
- Methods of External, **17**, 42.
- Methods of Internal, **17**, 44.
- Pressure, **15**, 41, 130; **16**, 71-2.
- Pressure Circulating, **16**, 101; **17**, 14; **18**, 103.
- Protection of, **17**, 28-32.
- Ring, Chain and Collar Oilers, **15**, 112; **16**, 71; **17**, 15; **18**, 105.
- Siphon, **14**, 126.
- Splash, **15**, 40, 101; **17**, 14, 92; **18**, 104.

- Lubrication (Continued):  
 Swing and Crowd Engine, **16**, 28.  
 Wick Feed, **14**, 126.
- Lubrication Recommendations:  
 Development of, **16**, 61-72.
- Lubrication Systems:  
 Aircraft Engine, **14**, 76.  
 Automotive, **14**, 37.  
 Plain Bearing, **14**, 69-72.
- Machine Inspection, **16**, 95-6.
- Machine Tool Lubrication:  
 Requirements, **16**, 102.
- Marine Steam Propulsive Machinery:  
 Lubrication of, **17**, 37-48.
- Materials Handling:  
 Compressed Air Machinery, **16**, 26-7.  
 Conditions of Operation, **16**, 25.  
 Equipment Involved, **14**, 109; **16**, 26.  
 Gear Drives, **14**, 119.  
 Lubrication in Presence of Water, **15**, 104-6.  
 Motive Power for, **14**, 113; **16**, 26.
- Mining Operations:  
 Drills, **18**, 5.  
 Locomotives, **18**, 4, 11.  
 Portable Compressors, **18**, 7.  
 Ventilation, **18**, 4, 11.  
 Wheel Bearings, **18**, 9-10.
- Motor Oil Characteristics:  
 Carbon Residue, **15**, 36.  
 Viscosity, **15**, 35.  
 Viscosity Numbers, **16**, 132.
- Motor Transport Equipment, **14**, 85.
- Navy Work Factor:  
 Calculation of, **17**, 63.  
 Method, **17**, 62.
- Oil Cooling, **15**, 110.
- Oil Engines. (See Diesels.)
- Oil Grooves, **17**, 81.  
 Dimensions of, **14**, 67.  
 Frequently Eliminated, **15**, 137.  
 Function of, **14**, 65.  
 Location of, **14**, 65.  
 Manner of Cutting, **14**, 68.  
 Plain Bearing, **15**, 65.  
 Purpose of, **14**, 64.
- Oil Storage:  
 Electric Railway, **15**, 78-9  
 Textile, **16**, 24.
- Oxidation, **17**, 34.  
 Effect of, **16**, 139.  
 Turbine Oils, **14**, 29; **17**, 9, 16, 74.
- Paper Machinery:  
 Back Drives, **16**, 130.  
 Bearing Lubrication, **16**, 123; **18**, 19-20.  
 Beaters and Washers, **16**, 122.  
 Calender Stacks, **16**, 131; **17**, 69.  
 Cylinder Machine Operations, **16**, 125.  
 Drying, **16**, 128; **18**, 62.  
 Felt Roll Bearings, **16**, 127.  
 Fourdrinier, **16**, 124.  
 Lubrication of, **16**, 121-132; **18**, 19-20.  
 Pressure Operation, **14**, 4.  
 Table Roll Operations, **16**, 126.  
 Wet End Operation, **16**, 124.  
 Wick Feed Design, **16**, 127.
- Pneumatic Tools:  
 Application of Lubricants, **14**, 59.  
 Design and Construction, **14**, 51.  
 Lubrication in Presence of Water, **15**, 100.  
 Purpose of, **14**, 51.
- Pottery Manufacture, **18**, 128-30.
- Pour Test:  
 Importance of, **15**, 42; **16**, 57.  
 Relation to Tractor Operation, **16**, 41.
- Pressure:  
 Centralized Lubrication, **15**, 130; **16**, 69, 100; **18**, 26.  
 Compression, **15**, 134.  
 Effect on Oil Film, **17**, 8.  
 Lubrication, **14**, 133-144; **15**, 41; **16**, 48, 72, 112; **17**, 92.  
 Problems of Lubrication, **14**, 1; **15**, 58.  
 Relation to Choice of Lubricant, **16**, 64.  
 Types, **14**, 3.
- Printing Machinery:  
 Flat Bed, **15**, 123.  
 Lubrication of, **15**, 121-32.  
 Press Construction, **15**, 121.  
 Pressroom Machinery, **15**, 121.  
 Web, **15**, 126.
- Process Heating:  
 Effect of Lubrication on the Use of Exhaust Steam for, **17**, 66-72.
- Pumps:  
 Centrifugal, **15**, 111.  
 Chain and Gear Driven Lubricator, **14**, 137; **16**, 68.  
 Deep Well, **14**, 21; **15**, 102.  
 Lubrication in Presence of Water, **15**, 102-4.  
 Mine, **15**, 103.  
 Oil, **15**, 55.  
 Rotary, **15**, 111.
- Purification of Used Oils. (See Reclamation.)
- Quenching:  
 Effect on Color of Steel, **18**, 42.  
 Purification, **18**, 41.  
 Types of Media, **18**, 37.  
 Use of Oil for, **18**, 37-42.
- Radiator Protection, **15**, 120.
- Railway Lubrication:  
 Electric, **15**, 73-84; **16**, 86-8.  
 Roller Bearing, **18**, 20-4.
- Reciprocating Steam Engines:  
 Lubrication of, **17**, 37-48.
- Reclamation of Used Oils:  
 Compressor, **15**, 46.  
 Methods, **17**, 32-6.  
 Motor, **14**, 94-6.  
 Quenching Oils, **18**, 41.
- Reduction Gears, **16**, 34; **18**, 67-72.  
 Cold Room Operations, **18**, 72.
- Refrigeration:  
 Compressor Lubrication, **17**, 91-4.  
 Elements, **15**, 37, 39.  
 Methods, **15**, 37.
- Roller Bearing:  
 Adaptability of, **18**, 13-24.
- Rubber Machinery:  
 Gear Lubrication, **16**, 141.  
 High Temperature Service, **18**, 65.
- Significance of Tests:  
 Acidity, **17**, 65.

Significance of Tests (Continued):

Carbon Residue, **17**, 65.

Precipitation, **17**, 65.

Viscosity, **17**, 64.

Silk. (See Textile.)

Slow Speed Machinery:

Textile, **16**, 21.

Sludge, **17**, 74, 92.

S.A.E. Viscosity Numbers, **16**, 132.

Steam Cylinders:

Lubrication in Presence of Water, **15**, 107.

Lubrication of, **16**, 33-4; **17**, 69; **18**, 27.

Stoker, **15**, 21-22.

Steam Propulsive Machinery:

Lubrication of, **17**, 37-48.

Steam Turbine Lubrication:

Bearings, **16**, 91-3.

Factors Involved, **14**, 25.

Low Viscosity, **15**, 81.

Pressure, **14**, 143.

Steel:

Developments in Lubrication, **16**, 109-20;  
**18**, 17-19.

Lubrication in Presence of Water, **15**, 101.

Reduction of Hazard in Steel Mill Operation,  
**16**, 119.

Rolling Mill Lubrication, **14**, 6.

Stoker:

Character of Lubricants, **15**, 20.

Design, **15**, 14.

Drives, **15**, 20.

Mechanisms, **15**, 18.

Steam Cylinder, **15**, 22.

Types of, **15**, 14.

Storage of Lubricants:

Electric Railway, **15**, 78-9.

Methods, **17**, 23.

Textile, **16**, 24.

Sugar Cane Cultivation, **18**, 49.

Sugar Machinery:

Beet, **18**, 56-60.

Cane, **18**, 53-6.

Cultivation, **18**, 50.

Harvester, **18**, 51-2.

Transportation, **18**, 50.

Sugar Manufacture:

Beet, **18**, 56-60.

Cane, **18**, 53.

Sulfur in Motor Oils, **14**, 47.

Supercharger:

Aircraft Engine, **14**, 83.

Superheated Steam Conditions, **17**, 47.

Surface Tension:

Defined, **16**, 134.

of Solids, **16**, 135.

Relation to Emulsification, **16**, 135.

Suspensoids, **16**, 138.

Temperature:

Methods of Control, **15**, 109-11.

Relation to Choice of Lubricant, **16**, 66.

Textile Machinery:

Bale Breakers, **16**, 16.

Carding Machinery, **14**, 21; **16**, 16.

Dye House, **17**, 67; **18**, 119-20.

Finishing, **18**, 66.

Gilling and Backwashing, **16**, 17.

Knitting, **14**, 105; **16**, 89-90; **18**, 117-8.

Textile Machinery (Continued):

Printing, **14**, 5.

Silk Mill, **14**, 106.

Textile Machinery Lubrication:

Chemical Aspects of, **18**, 109-20.

Comb Box, **16**, 16.

Combing Machine, **16**, 17.

Development of, **16**, 14.

Drawing, Roving and Spinning, **16**, 18.

Dye House, **16**, 22; **18**, 119-20.

Finishing, **16**, 23.

Jacquard, **16**, 22.

Low Viscosity, **16**, 88-90.

Mule Spinning, **16**, 20.

Silk Throwing, **16**, 20.

Slow Speed, **16**, 21.

Spindles, **16**, 18, 89.

Weaving, **16**, 21.

Tractor:

Design and Construction, **16**, 38.

Lubricating Systems, **16**, 39.

Lubrication, **16**, 37-48.

Turbine Oils:

Acidity, **17**, 75.

Bearing Lubrication, **16**, 91-3.

Characteristics, **14**, 25-31; **16**, 55-8.

Contamination, Prevention of, **14**, 35.

Demulsibility, **17**, 73-7.

Emulsibility, **14**, 25; **16**, 56; **17**, 73-7.

Foaming, **17**, 76.

Oxidation, **17**, 74.

Reconditioning, **16**, 58.

Requirements of, **15**, 116-17.

Sludge, **17**, 74.

Temperature Reduction, **14**, 36; **16**, 58.

Vertical Engines, **17**, 46-72.

Viscosity:

Aircraft Engine Oil, **14**, 74; **18**, 84.

Automotive Lubricants, **14**, 38; **15**, 35; **16**, 82.

Ball Bearings, **15**, 20.

Compressor Oils, **15**, 44; **16**, 28; **17**, 87.

Heat Transfer, **16**, 91.

Hydraulic Turbine Oils, **16**, 56.

Maintenance of, **15**, 116.

Meaning of, **15**, 114; **16**, 42, 67; **17**, 64.

Numbers, S. A. E., **16**, 132.

Relation to Choice of Lubricant, **16**, 65.

Relation to Demulsibility, **16**, 91.

Relation to Temperature, **15**, 113; **16**, 82.

Relation to Tractor Operation, **16**, 41-2.

Turbine Oils, **14**, 27.

Water:

Air Tool Lubrication, **14**, 57.

As a Cooling Media, **15**, 109; **17**, 44.

Automotive Lubrication, **14**, 45-7; **15**, 33-4.

Compressors, **15**, 43, 96.

Effect of, in Mine Drills, **18**, 6.

Effect on Turbine Oils, **14**, 31; **17**, 75.

In Steel Mill Lubrication, **16**, 119; **18**, 18.

Lubrication in Presence of, **15**, 97-108.

Wire Rope:

Lubrication of, **14**, 116-9; **15**, 104-6; **16**, 35-6.

Woodworking:

Essentials of Lubrication, **15**, 1-12.

Work Factor:

Navy, **17**, 62-3.

Worm Reduction Gear Lubrication, **18**, 67-72.